Columbus Public Health
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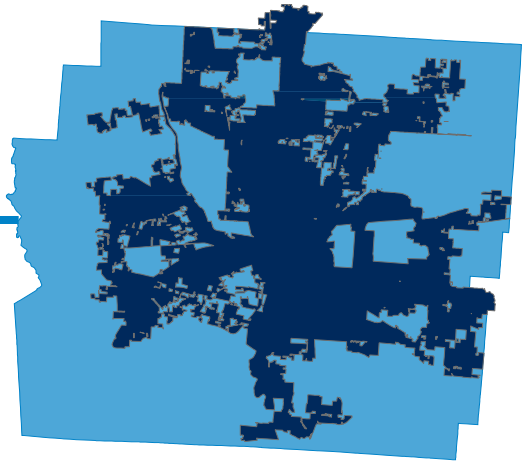
Division of Planning and Preparedness
Office of Assessment and Surveillance



Annual Summary of *REPORTABLE DISEASES* 2005

November 2006

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Introduction

Communicable diseases (also known as infectious diseases) are caused by microorganisms, such as bacteria and viruses. A person can contract a communicable disease from an infected person, an infected animal, and/or another infected source, such as water or food. Columbus Public Health (CPH) keeps track of the number of persons infected by different communicable diseases throughout the year. CPH also conducts follow-up investigations on all reported diseases by collecting demographic and clinical information, as well as exposure to potential sources of disease. By collecting this data, CPH staff is able to determine potential sources of disease, quickly implement control measures, detect trends and outbreaks, and create targeted policies and programs to protect or improve the health of the community.

The annual summary represents the 2005 communicable disease data required by Ohio law to be reported to state and local public health agencies. Only selected communicable diseases determined to be of public health significance are reportable; therefore, the data presented here do not represent all cases of communicable diseases that are reported in Columbus. Additionally, the data represent only confirmed cases of diseases and are provisional. Despite some of the limitations, the data presented here provide a reasonable portrayal of Columbus communicable disease rates. The summary is intended to be a resource for individuals and our public health partners for whom communicable diseases are a concern. Further information on communicable disease may be obtained by contacting Columbus Public Health.

Note: *This report contains information on Columbus residents. For information on Franklin County residents, contact the Franklin County Board of Health.*

The key findings of the report are summarized below:

- In 2005, a total of 2,230 cases of communicable disease were reported among Columbus residents. Of these, 1,394 were confirmed, 159 were probable, 623 were suspect, and 54 cases were unknown.
- Columbus' rate of communicable disease in 2005 was 154 cases per 100, 000 people.
- The rate of communicable disease in Columbus has declined by 3% since 2004.
- The incidence of Hepatitis B and C remained the highest (49.3 and 63.0 cases per 100,000 population, respectively).
- The rate of *Campylobacter* has decreased since 2002 from 10.4 cases per 100,000 persons to 5.7 cases per 100,000 in 2005.
- The rate of pertussis continues to increase from 11 cases per 100,000 persons in 2002 to 19.8 cases per 100,000 persons in 2005. This increase may reflect improved reporting by health care providers, and/or an actual rise in cases.

Know Your ABCs: A Quick Guide to Reportable Infectious Diseases in Ohio

from the Ohio Administrative Code 3701-3-02. Effective January 1, 2006

Class A Diseases

(1) diseases of major public health concern because of the severity of disease or potential for epidemic spread - report by telephone immediately upon recognition that a case, a suspected case, or a positive laboratory result exists

- Anthrax
- Botulism, foodborne
- Cholera
- Diphtheria
- Measles
- Meningococcal disease
- Plague
- Rabies, human
- Rubella (not congenital)
- Severe Acute Respiratory Syndrome (SARS)
- Smallpox
- Tularemia
- Viral Hemorrhagic Fever (VHF)
- Yellow Fever

Any unexpected pattern of cases, suspected cases, deaths or increased incidence of any other disease of major public health concern, because of the severity of disease or potential for epidemic spread, which may indicate a newly recognized infectious agent, outbreak, epidemic, related public health hazard or act of bioterrorism.

(2) diseases of public health concern needing timely response because of potential for epidemic spread – report by the end of the next business day after the existence of a case, a suspected case, or a positive laboratory result is known

- Arboviral neuroinvasive and non-neuroinvasive disease
  - Eastern equine encephalitis virus disease
  - LaCrosse virus disease (other California serogroup virus disease)
  - Powassan virus disease
  - St. Louis encephalitis virus disease
  - West Nile virus disease (also current infection)
  - Western equine encephalitis virus disease
  - Other arthropod-borne disease
- Chancroid
- Cyclosporiasis
- Coccidioidomycosis
- Dengue
- *E. coli* O157:H7 and other enterohemorrhagic (Shiga toxin-producing) *E. coli*
- Foodborne disease outbreaks
- Granuloma inguinale
- *Haemophilus influenzae* (invasive disease)
- Hantavirus
- Hemolytic uremic syndrome (HUS)
- Hepatitis A
- Hepatitis B, perinatal
- Influenza-associated pediatric mortality
- Legionnaires' disease
- Listeriosis
- Lymphogranuloma venereum
- Malaria
- Meningitis, aseptic, including viral meningoencephalitis
- Mumps
- Pertussis
- Poliomyelitis (including vaccine-associated cases)
- Psittacosis
- Q fever
- Rubella (congenital)
- Salmonellosis
- Shigellosis
- *Staphylococcus aureus*, with resistance or intermediate resistance to Vancomycin (VRSA, VISA)
- Syphilis
- Tetanus
- Tuberculosis, including multi-drug resistant tuberculosis (MDR-TB)
- Typhoid fever
- Waterborne disease outbreaks

(3) diseases of significant public health concern -- report by the end of the work week after the existence of a case, a suspected case, or a positive laboratory result is known

- Amebiasis
- Botulism, wound
- Botulism, infant
- Brucellosis
- Campylobacteriosis
- Chlamydia infections (urethritis, epididymitis, cervicitis, pelvic inflammatory disease, neonatal conjunctivitis and pneumonia)
- Creutzfeldt-Jakob disease (CJD)
- Cryptosporidiosis
- Cytomegalovirus (CMV) (congenital)
- Ehrlichiosis
- Encephalitis, other viral
- Encephalitis, post infection
- Giardiasis
- Gonococcal infections (urethritis, cervicitis, pelvic inflammatory disease, pharyngitis, arthritis, endocarditis, meningitis and neonatal conjunctivitis)
- Hepatitis B, non perinatal
- Hepatitis C
- Hepatitis D (delta hepatitis)
- Hepatitis E
- Herpes (congenital)
- Kawasaki disease (mucocutaneous lymph node syndrome)
- Leprosy (Hansen disease)
- Leptospirosis
- Lyme disease
- Meningitis, including other bacterial
- Mycobacterial disease, other than tuberculosis (MOTT)
- Reye syndrome
- Rheumatic fever
- Rocky Mountain spotted fever (RMSF)
- Streptococcal disease, group A, invasive (IGAS)
- Streptococcal disease, group B, in newborn
- Streptococcal toxic shock syndrome (STSS)
- *Streptococcus pneumoniae*, invasive disease (ISP)
- Toxic shock syndrome (TSS)
- Toxoplasmosis (congenital)
- Trichinosis
- Typhus fever
- Varicella
- Vibriosis
- Yersiniosis

Class B Disease - ***the number of cases is to be reported by the close of each working week***

- Influenza

Class C Diseases - ***report an outbreak, unusual incidence, or epidemic by the end of the next working day***

- Blastomycosis
- Conjunctivitis, acute
- Histoplasmosis
- Nosocomial infections of any type
- Pediculosis
- Scabies
- Sporotrichosis
- Staphylococcal skin infections
- Toxoplasmosis
- Outbreak, unusual incidence, or epidemic of other infectious diseases of known etiology not categorized as Class A, Class B or Class C

Except as otherwise required for the Class A(1) diseases, reports of cases and suspect cases and positive laboratory results shall be in writing, And shall include the name and address of the case, suspect case, or person from whom the specimen was taken. A Board of Health may accept verbal reports by telephone or other electronic systems approved by the Director within the same time limitations. Reports shall include supplementary information relevant to the case or laboratory reports as needed to complete official surveillance forms provided or approved by the Director.

Cases of AIDS (acquired immune deficiency syndrome), AIDS-related conditions, HIV (human immunodeficiency virus) infection, perinatal exposure to HIV, and CD4 T-lymphocytes counts <200 or 14% must be reported on forms and in a manner prescribed by the Director.

Reportable Disease Table 2001-2005 for Columbus, Ohio

	2005		2004		2003		2002		2001	
Population	730,657		728,907		728,191		722,940		719,988	
NR= Not reportable, NA = Not available										
Disease Name	# of Cases	Case Rate*	# of Cases	Case Rate*	# of Cases	Case Rate*	# of Cases	Case Rate*	# of Cases	Case Rate*
HIV/AIDS*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Amebiasis	8	1.1	3	0.4	5	0.7	5	0.7	7	1.0
Anthrax	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Botulism (foodborne)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Botulism (infant)	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
Brucellosis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Campylobacter	42	5.7	54	7.4	58	8.0	73	10.1	58	8.1
Cholera	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Chlamydia*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cryptosporidiosis	16	2.2	10	1.4	27	3.7	10	1.4	24	3.3
Cyctomegalovirus	2	0.3	0	0.0	0	0.0	0	0.0	0	0.0
Dengue	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Diphtheria	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E. coli O157:H7	6	0.8	3	0.4	10	1.4	9	1.2	8	1.1
E. coli Unspecified	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0
Encephalitis, (Vector Born)	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0
Encephalitis, West Nile	0	0.0	0	0.0	0	0.0	2	0.3	0	0.0
Giardiasis	59	8.1	58	8.0	57	7.8	94	13.0	107	14.9
Gonorrhea*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Haemophilus influenzae-Type B	2	0.3	3	0.4	2	0.3	3	0.4	8	1.1
Hantavirus	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Hemolytic uremic syndrome	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Hepatitis A	3	0.4	6	0.8	11	1.5	21	2.9	35	4.9
Hepatitis B *	360	49.3	61	8.4	230	31.6	376	51.8	75	10.4
Hepatitis C *	460	63.0	490	67.2	850	116.7	283	39.0	25	3.5
Legionellosis	24	3.3	47	6.4	35	4.8	34	4.7	15	2.1
Leprosy	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Leptospirosis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Listeriosis	3	0.4	2	0.3	1	0.1	3	0.4	0	0.0
Lyme disease	4	0.5	5	0.7	1	0.1	2	0.3	1	0.1
Malaria	5	0.7	3	0.4	2	0.3	11	1.5	1	0.1
Measles	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
Meningitis Aseptic (viral)	62	8.5	96	13.2	62	8.5	65	9.0	78	10.8
Meningococcal disease (N. meningitidis)	5	0.7	1	0.1	3	0.4	11	1.5	3	0.4
Meningitis (bacterial)	2	0.3	7	1.0	9	1.2	12	1.7	52	7.2
Kawasaki Disease	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mumps	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pertussis	145	19.8	104	14.3	92	12.6	80	11.1	41	5.7
Plague	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Polio	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Psittacosis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rocky Mountain Spotted Fever (RMSF)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rubella (congenital)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Reportable Disease Table 2001-2005 for Columbus, Ohio

	2005		2004		2003		2002		2001	
Population	730,657		728,907		728,191		722,940		719,988	
NR= Not reportable, NA = Not available										
Disease Name	**# of Cases**	**Case Rate***	**# of Cases**	**Case Rate***	**# of Cases**	**Case Rate***	**# of Cases**	**Case Rate***	**# of Cases**	**Case Rate***
Salmonellosis	73	10.0	55	7.5	56	7.7	51	7.1	99	13.8
Severe Acute Respiratory Syndrome (SARS)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Shigellosis	9	1.2	28	3.8	46	6.3	61	8.4	200	27.8
Smallpox	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Streptococcus pneumoniae invasive	76	10.4	79	10.8	62	8.5	109	15.1	87	12.1
Streptococcal disease-group A Invasive	10	1.4	20	2.7	21	2.9	20	2.8	16	2.2
Streptococcal disease-group B (perinatal)	9	1.2	10	1.4	12	1.6	21	2.9	15	2.1
Syphilis*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetanus	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0
Tuberculosis (TB)*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tularemia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Typhoid Fever	1	0.1	2	0.3	0	0.0	0	0.0	1	0.1
Vibriosis	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0
Yellow fever	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Yersiniosis	7	1.0	4	0.5	4	0.5	3	0.4	5	0.7
*** Please see notes for explanation**										

Campylobacteriosis

Campylobacteriosis is an acute enteric disease characterized by diarrhea, malaise, abdominal pain, fever, nausea and vomiting. The disease, caused by *Campylobacter* bacteria, has an onset within two to five days after exposure to the organism and commonly lasts another two to five days. People can spread the disease for several days to several weeks after they are infected. However, the period of communicability can be shortened to a few days by providing effective treatment, which may include rehydration and electrolyte replacement.

People can become infected with *Campylobacter* by handling raw chicken, eating undercooked poultry or drinking unpasteurized milk. Transmission occurs most commonly by ingestion of the infectious agents in undercooked poultry and pork, and by contact with infected infants, pets, or farm animals. Water streams and wells contaminated with animal feces may also pose a hazard. *Campylobacter* contamination can be prevented by thoroughly cooking all animal-derived foods, especially poultry. Cross-contamination can be avoided by hand washing after handling animals or raw poultry and thoroughly washing cutting boards and utensils with soap after contact with food.

Campylobacteriosis is one of the most commonly reported gastrointestinal illnesses in Columbus. The annual incidence rate of *Campylobacter* decreased from 10.4 case per 100,000 in 2002 to 5.7 cases per 100,000 persons in 2005 (Figure 1). In 2005, 42 cases were reported which is a 22% decrease from 2004.The cases ranged in age from less than 1 year to 86 years of age with a median age of 39 years. Fifty percent of the cases were in males. Figure 3 shows that most *Campylobacter* cases are reported in the spring and summer with a peak in July and August.

Figure 1
Campylobacteriosis Incidence Rates by Year and Location 2001-2005

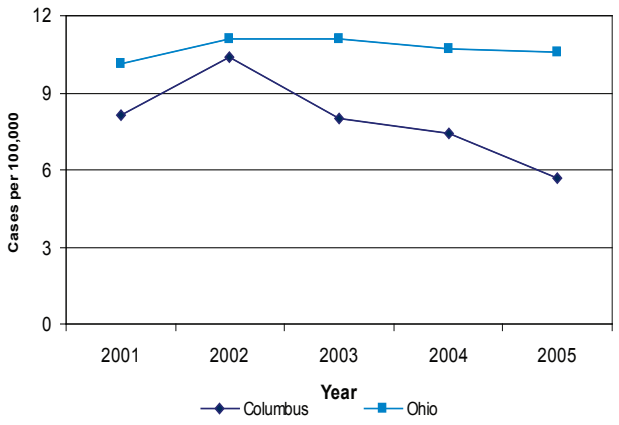


Figure 2
Campylobacteriosis Cases in Columbus by Age and Gender 2001-2005

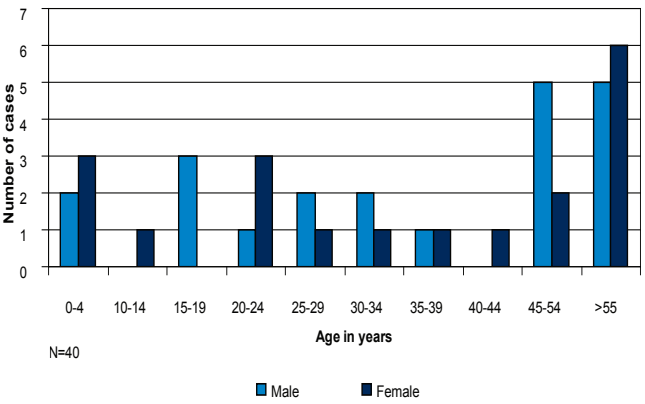


Figure 3
Campylobacteriosis Cases in Columbus by Month 2001-2005

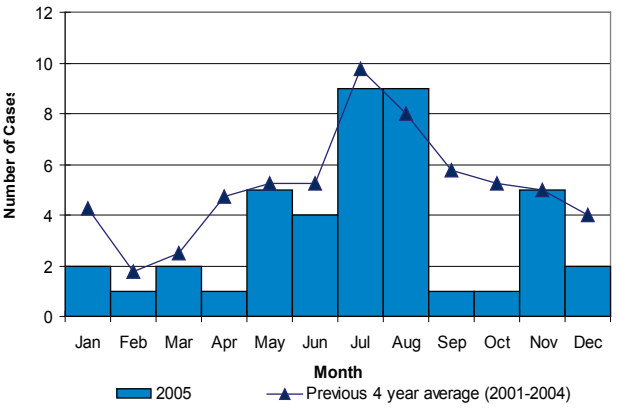


Figure 4
Salmonellosis Incidence Rates by Year and Location 2001-2005

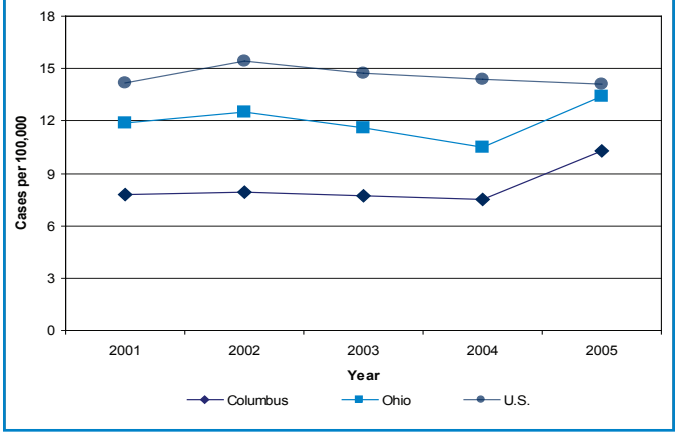


Figure 5
Salmonellosis Cases in Columbus by Age and Gender 2001-2005

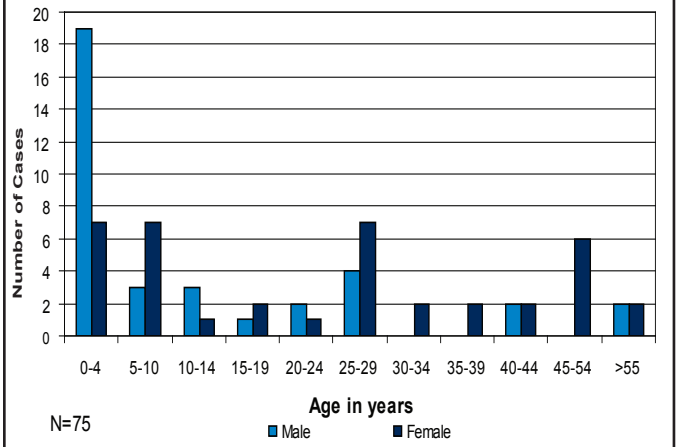
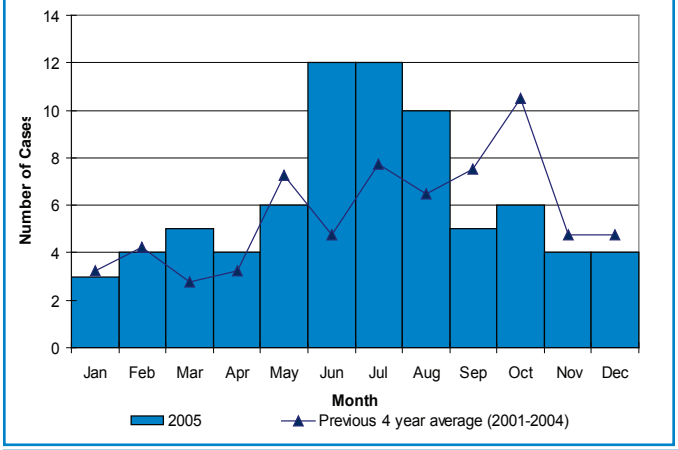


Figure 6
Salmonellosis Cases in Columbus by Month 2001-2005



SALMONELLOSIS

Salmonellosis is a bacterial illness characterized by acute abdominal pain, diarrhea, and often fever that begins 12 hours to 5 days after infection. The majority of human infections are thought to result from the ingestion of fecally contaminated food or water. Undercooked or raw products of animal origin such as eggs, milk, meat, and poultry have been implicated as common sources of human salmonellosis. In addition, a wide range of domestic and wild animals are carriers of *Salmonella*, including poultry, swine, cattle, rodents, iguanas, tortoises, turtles, terrapins, chicks, dogs and cats. Though uncommon, person-to-person spread can occur in humans — via patients, convalescent carriers and, especially, mild and unrecognized cases. The incidence of infection is highest in infants and young children.

Salmonella contamination can be prevented by thoroughly cooking all animal-derived foods, especially those from poultry. Cross-contamination can be avoided by hand washing after handling animals or raw poultry and thoroughly washing cutting boards and utensils with soap after contact with food.

The incidence rate of salmonellosis cases in 2005 was 10.3 cases per 100,000 population. This represents a 27% increase since 2004 and is less than both the Ohio and the national incidence rates (13.4 and 14.1 per 100,000, respectively). The reported *Salmonella* cases ranged in age from less than 1 year to 63 years of age, with a median age of 18 years. Fifty-two percent of the cases were in females. Figure 6 shows that most *Salmonella* cases were reported in the months of June and July.

Pertussis

Pertussis, also known as whooping cough, is a highly contagious bacterial infection of the respiratory tract caused by the bacterium *Bordetella pertussis*. Pertussis causes violent spells of coughing that may be followed by difficulty in breathing, vomiting, or "whooping." Transmission of pertussis occurs primarily by aerosol droplet and is most easily transmitted in the period starting 7 days following exposure to three weeks after the onset of spasmodic coughing. Seventy to 90 percent of susceptible household and other close contacts of a person with pertussis will develop the disease within 7 to 14 days, commonly 5 to 10 days. The disease may last up to 3 months and be complicated by pneumonia, seizures, or encephalopathy.

Because immunity induced by pertussis vaccine wanes 6 to 10 years after complete childhood vaccination, adolescents and adults can be susceptible to infection and transmission. In recent years, older patients are accounting for higher percentages of pertussis cases. Given this, neonates and infants who are too young to have received full vaccination are at risk of infection from contact with adults and older children who may not realize they are infected.

In 2005, Columbus continued to see an increase in the number of pertussis cases reported. There were 144 cases reported, with an incidence rate of 19.8 cases per 100,000. That is twice the rate for the state of Ohio and two and half times that of the nation as a whole. Among the 144 cases with known age, 40% occurred among children under the age of 4 years. Infants less than one year old accounted for 54% of these cases. Of all the cases, 27.5% were among adolescents 10-19 years. Columbus averaged 80 cases of pertussis each year between 2001-2004. Typically, pertussis cases in Columbus peak during the winter months and at the beginning of the school year.

Figure 7
Pertussis Incidence Rates by Year and Location
2001-2005

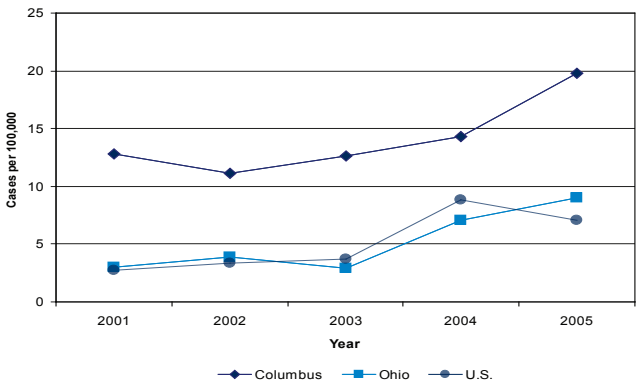


Figure 8
Pertussis Cases in Columbus by Age and Gender
2001-2005

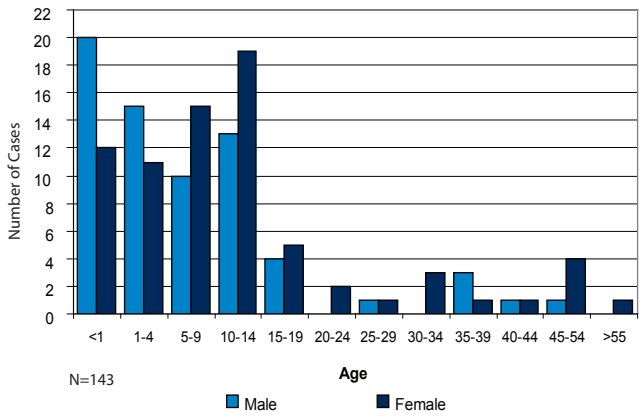
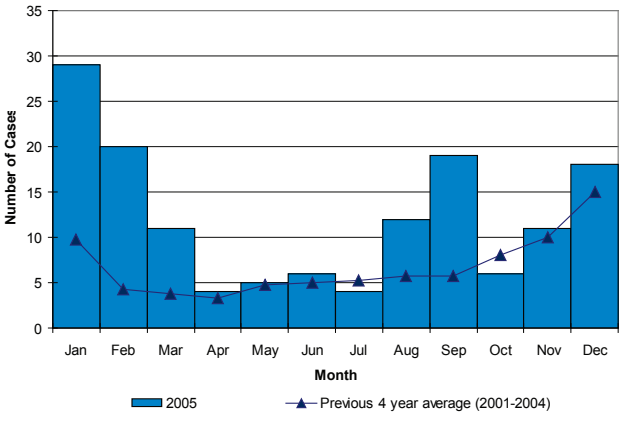


Figure 9
Pertussis Cases in Columbus by Month
2001-2005



Definitions and Methodology

The Ohio Administrative chapters 3701-3 require that communicable diseases be reported to local health departments. Reportable diseases are grouped by class. All the diseases reported in this summary are class A defined as:

1. Disease of major public health concern because of the severity of disease or potential for epidemic spread. Report by telephone immediately upon recognition that the case, suspected case, or positive laboratory result exists.

2. Diseases of public health concern needing timely response because of potential for epidemic spread. Report by the end of next business day upon recognition of a case, suspected case, or positive laboratory result.

3. Diseases of significant public health concern. Report by the close of each working week upon recognition of a case, suspected case, or positive laboratory result.

Case criteria and definitions

Case definitions are determined by the Council of State and Territorial Epidemiologists (CSTE) in conjunction with the CDC and are published in the MMWR [1997; 46(RR-10)]. Cases are grouped into the following categories:

Suspected case: a case for which a reportable condition is being considered in the differential diagnosis, but for which confirmatory laboratory testing has not yet been completed

Confirmed case: a case that is classified as "confirmed" for reporting purposes

Probable case: a case that is classified as "probable" for reporting purposes

For a complete list of reportable diseases in Ohio, please visit http://www.odh.ohio.gov

Notes on specific diseases and rates

Chronic cases of Hepatitis B and C became reportable in 2003; therefore, counts prior to 2003 include acute cases only.

Calculated disease rates are limited to confirmed cases and exclude STDs, TB and HIV/AIDS diseases.

The population estimates used in rate calculations were obtained from the United States Census Bureau. http://quickfacts.census.gov/qfd/states/39/3918000lk.html

Diseases not included in the table

There were no known cases in Columbus of the following Class A reportable diseases or they were not included in the table: creutzfeldt-jakob disease, ehrlichiosis, hepatitis D, hepatitis E, herpes (congenital), lymphogranuloma venereum, mycobacterial disease (other than TB), reye syndrome, rheumatic fever, syphilis, streptococcal toxic shock syndrome (STSS), toxic shock syndrome (TSS), toxoplasmosis, trichinosis, varicella (death only). Class B reportable diseases are not included in the table.

Notes on reporting systems

STDs, TB and HIV/AIDS data are not available for Columbus separate from Franklin County; therefore, they were not included in this summary.

Data are from the Ohio Department of Health and the Communicable Disease Reporting system (CDRS), (a joint effort between Columbus Public Health and Franklin County Board of Health). Cases of sexually transmitted diseases, tuberculosis, AIDS, and HIV have separate reporting systems and are considered separately. The numbers in this summary do not necessarily reflect City cases reported to the ODH-ODRS system. Cases may have been excluded due to the reporting time, onset date, or when the supplemental information was received.

References

Centers for Disease Control and Prevention. *Summary of Notifiable Diseases:*

http://www.cdc.gov/epo/dphsi/annsum/phs/infdis.htm

http://www.cdc.gov/ncidod/diseases/

http://www.publichhealth.columbus.gov

http://www.cdrsinfo.com/

The Ohio Department of Health Infectious Disease Control Manual.